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**Testimony Before the  
House Committee on International Relations  
Subcommittee on International Terrorism and Nonproliferation**

Good morning Chairman Royce and Members of the Committee and thank you for holding this hearing to advance our understanding of America's dependence on oil and the serious national security vulnerabilities of this dependence which, if exploited, could result in widespread economic dislocation and increased global instability.

I speak to you today on behalf of Securing America's Future Energy (SAFE), a nonpartisan group that is committed to reducing America's dependence on oil in order to improve our national security and strengthen the economy. SAFE is working to transform oil dependence from a rhetorical turn of phrase and an insider's game to a tangible economic and national security issue that compels political leaders, business executives and the public to act now.

On June 23, 2005, SAFE, in partnership with the National Commission on Energy Policy, conducted a high profile Cabinet Level Oil Crisis Simulation called *Oil ShockWave*, which explored the extent and acuteness of the economic and national security threat and the possible consequences of American oil dependence.

In this half-day exercise, top former government officials took part in a series of Principals meetings of the Cabinet or of a Special Working Group over a seven-month period in order to advise the President on how to respond to a series of events that affect world oil supplies. The scenarios were designed to simulate a decline in world oil production due to regional instability and to terrorism. The simulation events began in December 2004 to provide some distance from current events.

Situations were presented primarily through pre-produced newscasts shown on video screens as well as "injects" or notes given to Cabinet members throughout the simulation. The participants were informed of their roles ahead of time, but they were not informed about the events and situations they would encounter. We wanted them to respond in real time to each new situation. However, Dr. Robert Gates, President of Texas A&M and former Director of Central Intelligence, who played the role of National Security Advisor in the simulation, was considered in simulation parlance "a trusted agent" so he was made aware of the scenarios before the event.

**Simulation Participants**

The *Oil ShockWave* Cabinet was comprised of the following bi-partisan group of former Cabinet members and senior government and national security officials:

**Robert M. Gates**, former Director of Central Intelligence and current President of Texas A&M;

**Carol Browner**, former Administrator of the Environmental Protection Agency;

**Richard N. Haass**, former Director of Policy Planning at the Department of State and current President of the Council on Foreign Relations;

**General P.X. Kelley**, USMC (Ret.), former Commandant of the Marine Corps and member of the Joint Chiefs of Staff;

**Frank Kramer**, former Assistant Secretary of Defense for International Security Affairs;

**Don Nickles**, former US Senator (R-OK);

**Gene B. Sperling**, former National Economic Advisor and head of the National Economic Council;

**Linda Stuntz**, former Deputy Secretary of Energy;

**R. James Woolsey**, former Director of Central Intelligence.

I certainly want to take a moment on the record to thank them all again for participating and for committing a significant amount of time. It is due to the participation of such prominent, serious, and well-respected people that we are able to bring even more awareness to this critical economic and national security issue.

I want to spend my time discussing three things: (1) Why we developed *Oil ShockWave*? (2) How we developed *Oil ShockWave*? and (3) What we learned from *Oil ShockWave*?

### **I) Why We Developed *Oil ShockWave*?**

We believed that developing and conducting a simulation would be an engaging format to generate attention for this issue, but more importantly to foster an understanding of our energy insecurity. The simulation was designed to make this issue real and tangible for the public as well as lawmakers and policymakers.

The oil markets are so vast and complex and the threats are so varied that sometimes it is difficult to comprehend the issue of oil use, oil dependence, and oil security threats and risks. We received great feedback for the SAFE brochure that simply laid out the key facts with very little editorial comment. The facts themselves are incredibly compelling and persuasive. For instance (quoting directly):

- “97% of transportation in the United States is fueled by oil”
- “The transportation sector alone consumes 68% of all US oil”
- “Total US oil consumption is forecasted to increase by 40% from 2003 to 2025”

- “125% increase in the demand for oil in India and China 2003 to 2025”
- “\$7.4 billion increase in the US oil bill per year for each one-dollar increase in the price of oil.”

The simulation, in a different and more serious format, similarly gets to the key facts in a compelling fashion.

Furthermore, it was important for us to get beyond some of the general statements of oil dependence and look into the specific issues, threats, consequences, and responses. There is nothing like watching, listening, and learning as a group of former Cabinet members and senior government officials sit in a “mock” situation room responding in real time to a series of plausible and credible events. This is hopefully something that all champions of this issue can use to build support for serious action.

Finally, based on recent discussions about how market speculators and traders have changed the oil futures market and are currently driving the price of oil, we wanted to do some modeling that brought this new dynamic into the equation when considering possible scenarios and the impact on oil prices. Thus, we were hopefully able to contribute some new intellectual analysis and content to the public discussion on oil markets and national and economic security.

## **II) How We Developed *Oil ShockWave*?**

From the first day we started planning the simulation, we believed that being profoundly realistic and having unimpeachable credibility was imperative. Therefore, we recruited and worked with a group of experts and “credentialers” in the fields of national security, world oil production and distribution, trading, and macroeconomics to develop and verify the authenticity and plausibility of all aspects of the scenario from the oil market disturbances to the impact on oil prices and the economy. These included former members of the oil industry, oil analysts and traders, former and current military officials, intelligence and national security experts, and other specialists.

For instance, we worked closely with: David Frowd, former Head of Strategy and Planning in Shell’s Upstream Headquarters in the Hague and former Head of the Energy Team in Shell’s Global Business Environment Department; Neil McMahon, a prominent Oil Analyst at Sanford Bernstein; Rand Beers, former Special Assistant to the President and Senior Director for Combating Terrorism; Ged Davis, former Head of Royal Dutch/Shell Group Scenarios Team; and Colonel Randall J. Larsen, Founding Director of The Institute for Homeland Security and Simulation Game Specialist.

The fundamental question we needed to address was the means to take oil off the market. There were literally hundreds of scenarios to take oil off the market to different degrees and for different periods of time. It was our determination to put together a set of circumstances and events that were dramatic, but were neither shocking nor unexpected. We worked diligently to stay away from the sensational. As Robert Gates told the *Washington Post* after *Oil ShockWave*, “the scenarios portrayed were absolutely not alarmist; they’re realistic.” Jim Woolsey, another former Director of Central Intelligence, who played the Secretary of Homeland Security called the attacks during a post-simulation interview “relatively mild compared to what is possible.”

Beyond the terrorist threat to a vast and vulnerable oil infrastructure and system, it was the danger of political instability in countries/regimes that are major oil producers that presented the greatest risk to the US and our oil dependence. Freedom House considers only 9% of world oil reserves to be in countries that are considered “free” and Transparency International has shown that oil riches are highly correlated to their corruption rating. In many respects, it is the political instability and possible violence that force international oil expertise to leave the country and scares away foreign investment that is a more serious threat to the long-term stability of oil markets and the ability to meet world demand. For instance, some of the slowdown in Russian production that is an important element of world oil supply and demand forecasts is simply attributable to a tougher regulatory and less secure investment environments based on recent actions by the Russian government against Yukos and other oil interests.

### **The Scenario**

In the end, we settled on three segments. Segment 1 takes place roughly 5-months from today on December 14, 2005 with political violence and unrest in Nigeria, the fifth largest supplier of oil to the US, forcing foreign companies to “shut-in” or close 600,000 barrels of oil per day in the Niger Delta for the foreseeable future. The situation is exacerbated by a very cold winter in the northern Hemisphere that increases demand by 700,000 barrels of oil per day. Based on the current projections of demand and supply at the time, these events result in a gap of more than 2 million barrels per day between supply and demand. We predicted this shortfall would drive a barrel of oil from \$58 at the start of the simulation to \$82 per barrel at the end of Segment 1. The price of gasoline rose from \$2.21 to \$3.31 respectively.

This Segment turned out to be more realistic and plausible than we could have expected. Several days before we conducted *Oil ShockWave*, crude oil prices broke \$60 on news of possible unrest and al Qaeda activity in Nigeria. It was odd to have reality catching up to the simulation we had started developing several months before. We had initially been debating if a starting price for oil at \$58 was too high. In fact, we were a bit low!

Segment 2, involving coordinated terrorist attacks in the US and Saudi Arabia, takes place on January 16, 2006. The first attack is on the Haradh natural gas processing plant in Saudi Arabia, about 280 km southeast of Dharan, taking 250,000 barrels of oil off the market that now needs to be diverted for domestic use. There is also a failed attempt to ram a hijacked super tanker into another tanker at a loading jetty at Ras Tanura, the world’s largest oil port. Finally, about 20 minutes into the Segment, the Secretary of Homeland Security informs the Cabinet that a super tanker has rammed into another tanker at the port of Valdez in Alaska and there has been a ground attack on the holding tanks that are now on fire. The attack on the port of Valdez takes another 1 million barrels of oil off the market per day. This means that the world oil shortfall is about 3.4 million barrels per day. We predicted this shortfall would drive a barrel of oil to \$123 and the cost of gasoline to \$4.74 per gallon. This type of coordinated attack bears the classic signature of al Qaeda.

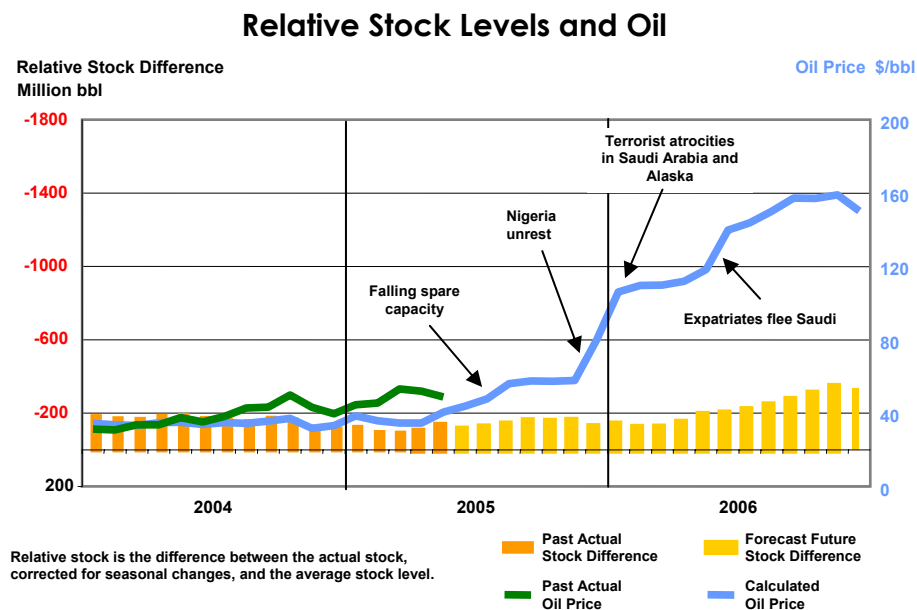
Segment 3 takes place on June 23, 2006, six-months after the initial event that begins the simulation. A new campaign of terror against foreign nationals in Saudi Arabia has forced them to be evacuated. In the prior 48 hours, 120 Americans have been killed and another 100

wounded; altogether more than 200 foreign nationals have been killed and 250 have been wounded. It is the highly aggressive crackdown on dissidents and al Qaeda sympathizers after the attacks in January on the Haradh natural gas processing plant and Ras Tanura that appears to be resulting in this popular backlash and terror campaign. The loss of international oil expertise means that Saudi Arabia will not be able to meet future demand growth and to build, hold, and use spare capacity. This scenario drove the price of oil to \$161 per barrel and the price of gas to \$5.74 per gallon. It is critical to note that no additional oil was taken off the market. The mere inability to have Saudi Arabia as the producer of last resort is enough to create unimaginable consequences.

### The Impact of Events on the Price of Oil

I do not want to spend too much time explaining how we arrived at the prices for oil as we have a witness from Sanford C. Bernstein, who will hopefully speak about the issue and who helped develop one of the “pricing models” for the simulation. However, I will quickly review some of the people we consulted and their approaches to pricing.

First, a price-forecasting model we consulted, independent of Bernstein, was looking at stock levels and risk premiums (see submitted attachment). In general, high oil stocks, held by government and industry, lead to low prices, and low stocks lead to high prices. However, during 2004 and the early part of 2005, oil prices have been much higher than the supply/demand balance and the resultant stock levels would suggest. Many experts attribute this to added risk premiums in an unpredictable world with little spare capacity. Based on events in *Oil ShockWave*, we believed the market perceptions of risk premiums determining the price of oil would become even more pronounced. David Frowd, a former oil industry executive, offered the following graph to track prices during the scenario:



Second, we consulted with Neil McMahon PhD and his team at Sanford C. Bernstein to review the scenario and offer an analysis regarding the impact of scenario events on the price of oil. Bernstein is a unit of Alliance Capital Management that manages some \$64 billion (as of December 31, 2004) for a private clientele and is well known for investment research. They used the Bernstein Oil Price Calculator to calculate initial prices and prices for Segment 1. The key inputs of the Bernstein Oil Price Calculator are oil demand, spare OPEC capacity, and non-OPEC supply projections. This method did not work for Segments 2 and 3 of *Oil ShockWave*. By Segments 2 and 3, there was no longer any OPEC spare capacity in the global oil system based on prior simulation events, and thus the metrics fell outside the boundaries of the Calculator. Dr. McMahon and Bernstein oil analysts used historical analogues to calculate prices for Segments 2 and 3. Sanford C. Bernstein has since issued an in-depth 27-page report based on *Oil ShockWave*.

It should be noted that we consulted with additional analysts and experts who offered opinions based on private trading models. These were in line with our price projections throughout the simulation.

### **Economic Effect of Projected Oil Spike to \$120**

The final economic analysis we conducted regarded the economic effects of oil at \$120 per barrel. This is roughly the price of a barrel of oil at the end of Segment 2. Ronald E. Minsk, former Special Assistant to the President for Economic Policy at the National Economic Council, was the principal author. Some of the key findings were as follows:

- a recession following two quarters of declining GDP and a decline in 2006 GDP compared to 2005 GDP;
- approximately 800,000 jobs were expected to be lost during 2006, and over 2 million were expected to be lost in 2007, relative to baseline forecasts;
- a \$2,680 increase in annual gasoline costs to the average US household, driving average annual household gasoline costs to a total of \$5,214;
- an historically significant decline in the S&P 500;
- a dramatic increase of the current accounts deficit - to \$1.087 trillion in 2006 and to \$1.052 trillion in 2007 - as a result of the increased cost to purchase “foreign” oil.

Ronald Minsk notes several factors that cause the fall in GDP and the ensuing recession:

- consumers spending more on gasoline and thus cutting other spending;
- certain energy intense capital is idled or its utilization rate falls;
- automobile purchases decline sharply due to the uncertainty of oil prices;
- air travel falls as airfares rise due to higher fuel prices;
- lower consumer spending due to lower consumer confidence.

The potential economic effects of oil prices in Segment 3 were not estimated because crude oil at \$161 is so far outside the range of experience that there were no models on which to base estimates.

### III) What We Learned From *Oil ShockWave*?

It is useful to review some of the key findings from *Oil ShockWave*. We did not seek to reach unanimous conclusions among the participants, however, a majority of participants would most likely embrace most of the findings and recommendations.

First, there is really no such thing as “foreign oil.” Oil is a fungible global commodity. A change in supply or demand *anywhere* will affect prices *everywhere*.

Second, we discovered that taking such a small amount of oil off the market could have significant impact on crude oil prices and gasoline. Oil markets are currently precariously balanced. Small supply/demand imbalances can have dramatic effects. We essentially took only 3.5 million barrels off a roughly 84 million barrel global daily market. This means that a supply shortfall of approximately 4% could cause prices to rise to \$161 per barrel of oil or to \$5.74 per gallon of gasoline. This would create tremendous national security and economic problems for the country.

Third, the prices of crude oil rose quickly. It would not necessarily take much to go from \$60 to \$123 or even \$161.

Fourth, once oil supply disruptions occur, little can be done in the short term to protect the US economy from its impacts. There are few good short-term solutions.

Fifth, there are a number of supply-side and demand-side policy options available that would significantly improve US oil security. Benefits from these measures will take a decade or more to mature, and thus should be enacted as soon as possible. This is the reason we must act now to end this national and economic security vulnerability.

Sixth, US foreign and military policy is influenced by – and often constrained by – US oil dependence. For example, during *Oil ShockWave*, the Saudi Arabian and the Chinese governments attempt to extract concessions out of the US in order for them to accede to US requests to help alleviate the crisis. In Segment 1, the Saudi Arabian government demands among other things that the US stop pressuring them to democratize and to stop discussing and investigating money laundering allegations and donations to al Qaeda in order to increase production capacity. In Segment 2, the Chinese government demands the US stops discussing Chinese human rights violations and stops selling weapons to Taiwan in order to accede to a request to reduce demand voluntarily. It should be noted that in both cases the *Oil ShockWave* Cabinet refused to accede to these demands.

Seventh, the Strategic Petroleum Reserve (SPR) or the emergency supply of federally owned crude oil (approximately 640 million barrels of oil) in underground salt caverns, offers at best limited protection against a major supply disruption. More importantly, determining when to use the SPR was more of an art than a science. There never seemed to be an appropriate opportunity and the Cabinet spent much time arguing when and how to release oil from the SPR. For instance, military and security were always concerned that releasing oil from the SPR could leave the US without any options if matters deteriorated further. There were also concerns that any announcement of a release of oil from the SPR could be overtaken or overshadowed by

world events and thus prove meaningless as a psychological weapon. Furthermore, it was noted that releasing oil from the SPR could have the opposite effect and actually contribute to an increase in prices, as any release would be seen as confirmation about the acuteness of the crisis. Finally, the SPR is virtually meaningless in Segment 3 if Saudi Arabia is truly unable to increase production for a sustained period of time.

Eighth, the oil system is vulnerable to attacks on key energy infrastructure both overseas and at home. Because that infrastructure is simply too vast to protect, we must seek other ways to reduce this vulnerability such as reducing demand and finding alternatives to diversify fuel sources. It should be noted that during *Oil ShockWave* in Segment 2 Saudi Arabian security forces were able to foil terrorist attacks on Ras Tanura, a major oil facility. We thought it would be useful and telling to have a crisis despite the fact that Saudi Arabia was generally successful in protecting their major oil facilities. Most ominously, al Qaeda and Bin Laden have explicitly called for attacks and even attempted attacks on the oil infrastructure and by extension the Western economic system.

Ninth, the stability of the entire oil-based global economy is currently dependent on Saudi Arabia's ability to increase production dramatically and over a short timeframe. Given existing terrorist threats and political tensions in Saudi Arabia, this situation is fraught with enormous liabilities. This does not account for the argument made by many that oil revenues have likely funded terrorism and fueled hatred against America.

Tenth, in the event of a crisis, the US has a few short-term options - such as tapping the Strategic Petroleum Reserve and implementing emergency demand measures, like carpooling, reducing speed limits, alternative drive days- as well as a number of promising long-term options - such as developing unconventional oil resources, improving fuel economy, and promoting alternative fuels. The short-term options, however, are generally good for less than a year, while the long-term options typically require a multi-year lead-time. In short, we have very few options at present for managing years two through five or ten of a prolonged oil crisis.

## **Conclusion**

With 97% of transportation in the US fueled by oil, oil is the lifeblood of the US economy. *Oil ShockWave* demonstrated that the nation must move rapidly to protect the nation from an oil supply crisis that could have dramatic economic and national security implications.

Any meaningful interruption of global oil supplies would seriously strain the ability of the US to fund an aggressive and comprehensive war on terrorism. Key oil facilities have been attacked before, and it is virtually certain there will be more attacks. Most interestingly, it is instability, sometimes as the result of terrorism, in oil producing countries that poses such a serious threat to US oil security. (Of note, the stability of Saudi Arabia and its ability to meet short-term and long-term demand requirements are critical to the entire oil-based economy.) There are also serious questions about the use of oil revenues to fund terrorism and hatred against America.

It took a series of unsurprising events to drive the price of crude oil to \$161 per barrel and the price of gasoline to \$5.74 per gallon. More importantly, it only took a supply shortfall of



approximately 4% or 3.5 million barrels out of a daily global market of roughly 84 million barrels to reach these prices in *Oil ShockWave*.

Unfortunately, once an oil supply disruption happens, there are no good short-term answers. It is thus essential that the President and Congress immediately implement a long-term strategy for reducing America's oil dependence. We need a concerted effort in the halls of Washington and boardrooms across the country. This is a grave national and economic security issue demanding the attention of our political and business leaders.

When we were attacked on 9/11, many people were surprised at the terrorist threat and the US vulnerability. Our response to 9/11 must be to make sure that we are not surprised again. We must anticipate and prepare for the next attack by acknowledging the vulnerabilities and addressing them. Few weaknesses demand greater attention than oil security.

Thank you.